

The Utilization of Biological Samples by the Criminal Justice System in Sri Lanka: An Explanatory Study on Forensic Testing

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Abstract

Biological samples are used in forensic medicine to identify individuals, establish the time of death, determine the cause of death, and other reasons regarding the crime. This qualitative research involves both primary and secondary sources and focuses on the criminal investigation procedure based on the utilization of biological samples which involves a variety of techniques, including fingerprinting, Genetics profiling, serology, and other conventional methods. These techniques rely on meticulous examination and comparison to establish connections between the evidence and potential perpetrators. Biological evidence can provide investigators with valuable information about the perpetrators of crimes and help solve cases that would otherwise be cold. In the Sri Lankan context, the usage of biological sample testing is a common practice. However, in the 21st century, technological and scientific advancement has led to the usage of novel methods in the identification of the perpetrator which has made biological testing more flexible and prudent, but this is not fully grasped by the country. Furthermore, the law enforcement authority plays a vital role in the investigation, whereby, they are responsible for securing the scene, preserving evidence, collecting fingerprints, and other physical evidence. Biological samples have the potential to be a valuable resource for a criminal investigation. However, there are a number of challenges that need to be addressed as well. If these challenges are well addressed, biological samples can be more beneficial in identifying perpetrators and aiding in the well-being of the people of Sri Lanka.

Keywords: *Biological Sample, Fingerprints, Genetics profiling, Conventional Methods, Investigation, Evidence, Sri Lanka*